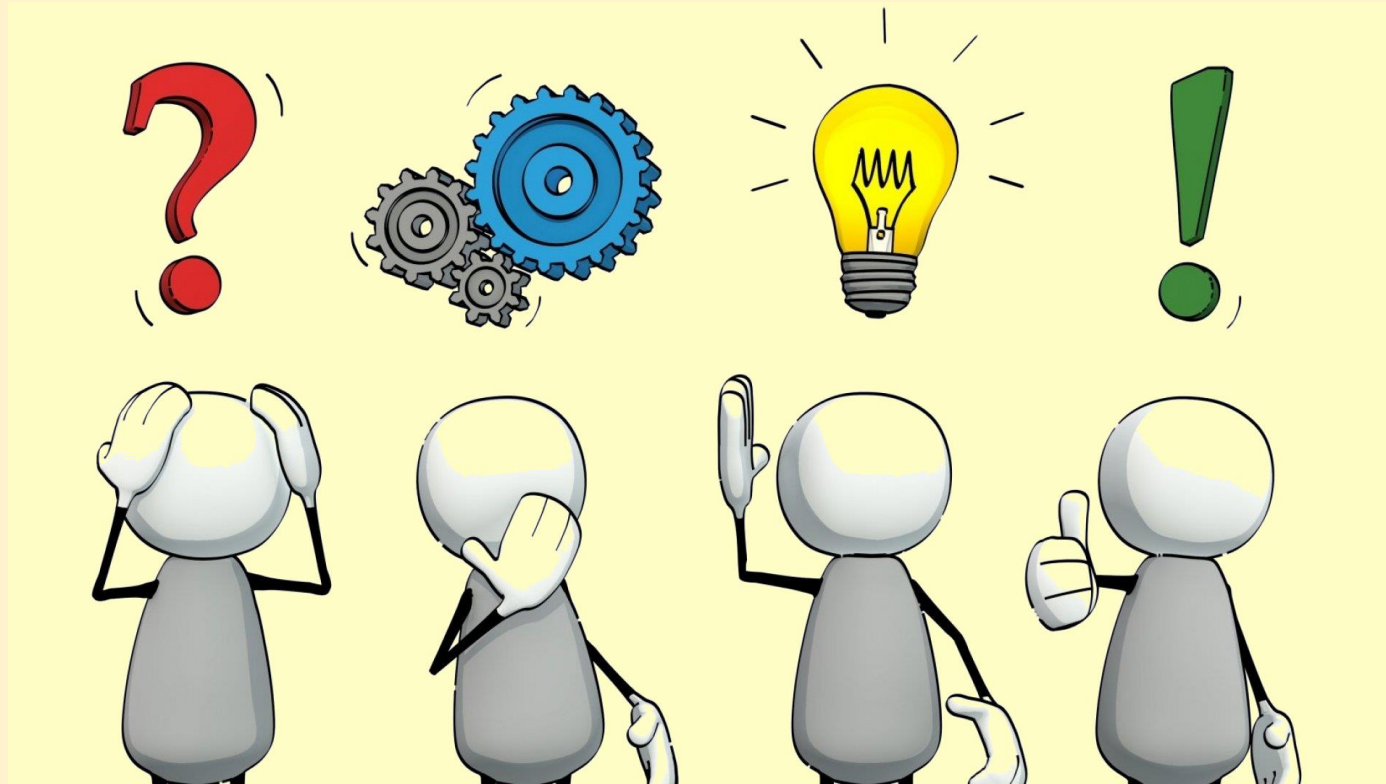




Sound



Recap - how is sound made?



Explain to
someone in
your house
how sound is
made...

Today we are considering how
sound travels?

What do you think?

How does sound
travel from the source
to your ear?



Listen to sounds outside your house
- what can you hear?



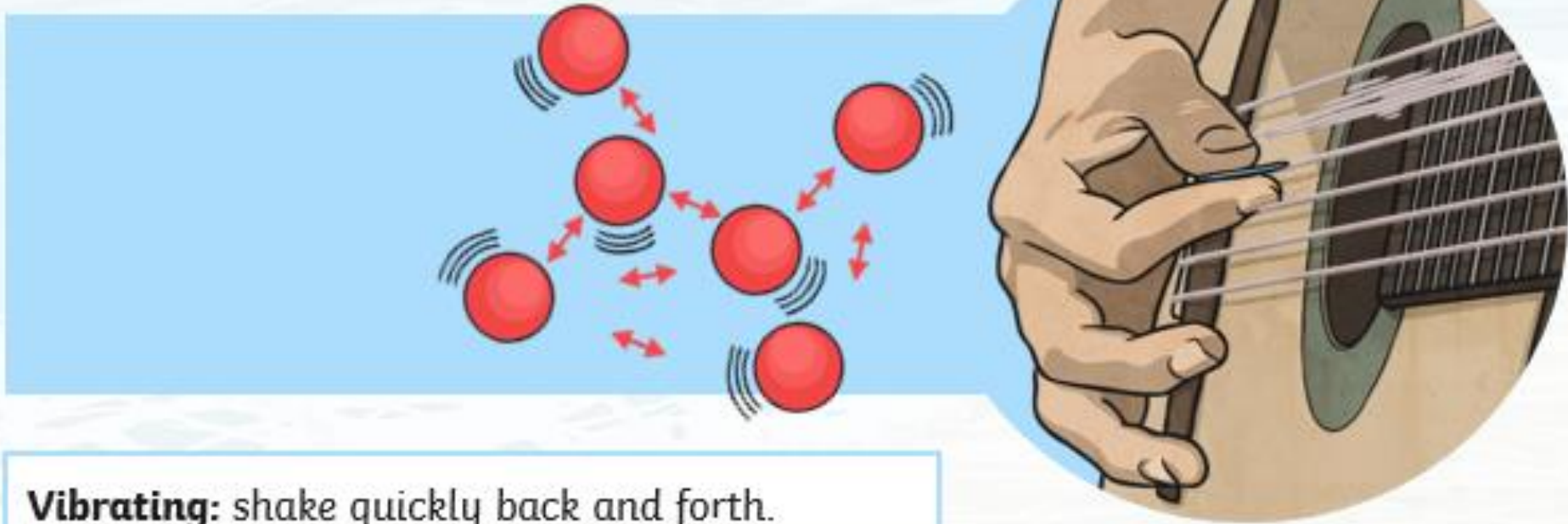
How did you hear the sound when
the doors/windows are shut?

On a piece of paper, draw how you think the sound travelled into the house from outside?



How does sound travel?

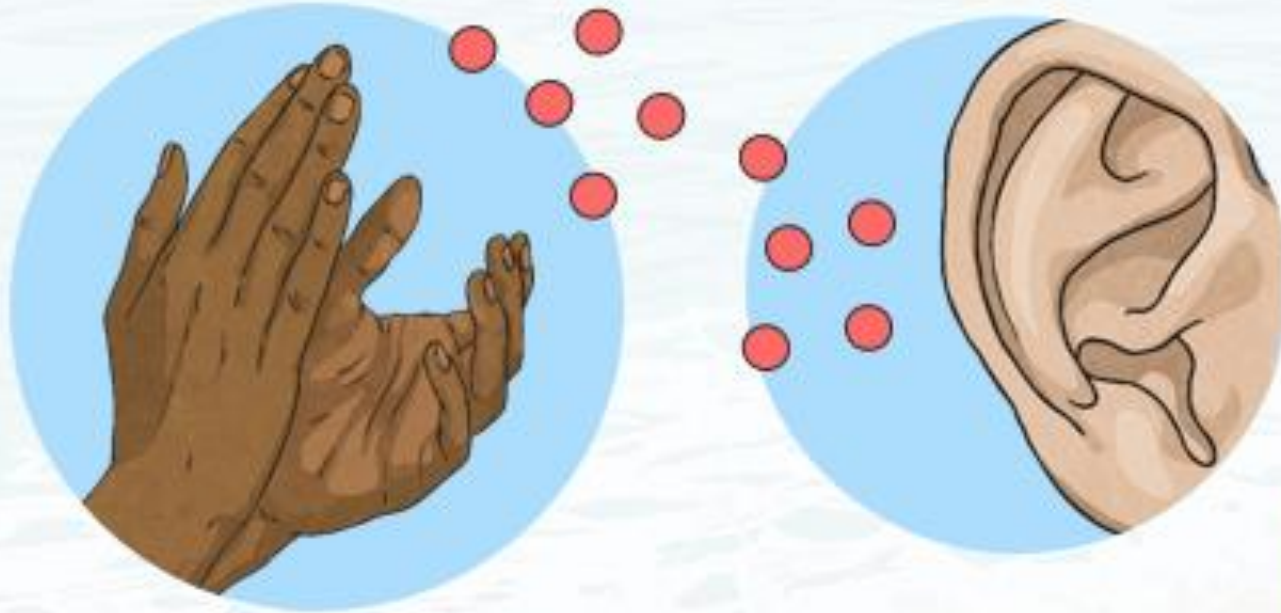
- Like light, sound travels through the air in waves.
- Sound is made by air molecules **vibrating**.
- When you clap your hands, the air around your hands shakes. This is the air molecules vibrating.



Vibrating: shake quickly back and forth.

How does sound travel?

The vibration of the air molecules around the hands shake the molecules next to them and so on, until the air molecules in the ear are vibrating.



Have you ever felt a speaker when the sound is on?
It vibrates.



How does sound travel?



Molecules Vibrating

When air molecules inside the ear vibrate, they shake tiny hairs on the insides of the ears.

The hairs are connected to nerves under the skin.

These nerves send messages to your brain to tell you that you heard a noise.



Communicating with the brain

How does sound travel?

- Sound needs molecules to move. It is impossible for sound to travel in space.
- Sound doesn't have to move through air. It can travel through water or metal.
- In fact, sound travels faster through water and solids than it does through air.



How does sound travel?

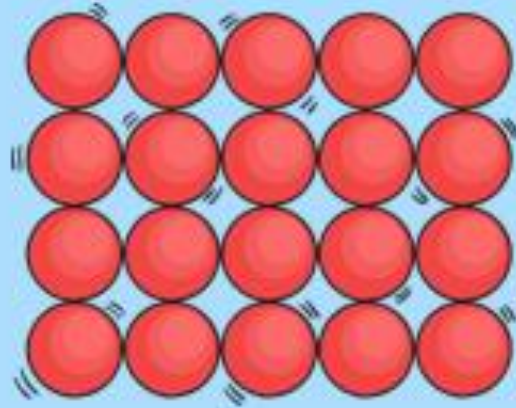
- Sound travels much slower than light, whether in air or in water.
- You often hear things after you see them, for example you see the lightning before you hear the thunder.

Light travels at 186,000 miles per second.
Sound travels at 770 miles per hour.

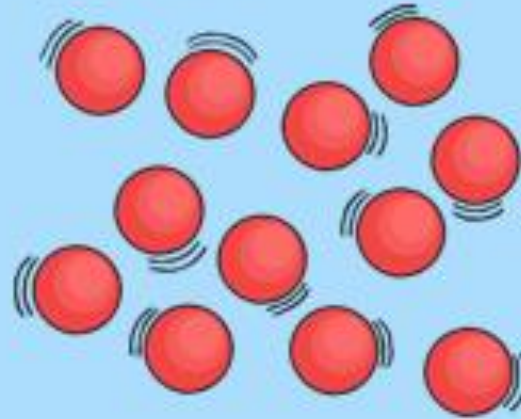


How does sound travel?

Why do you think sound travels faster through solids and liquids than gases?



Solid



Liquid

Hint: think about how close the molecules are to each other.

Watch this video to help
you understand..

<https://www.youtube.com/watch?v=QECaVkJP9zYQ>



Self-assess using smiley faces

